HISTORY OF AGRICULTURE.*

Of the many constitutional wants of man, that of food seems to be the most imperative. In every age and in every climate mankind have been spurred on to the most varied resources to appease and gratify this undying want of their nature. With sea-coast people, fish forms the staple of their food; with nomadic tribes the milk of cows and sheep; with others, chestnuts, Indian corn, and potatoes form the basis of their food. But as corn has become more and more the principal element in human nourishment, any insufficiency in this important article has led to very great distress. The occasional recurrence, however, of a deficiency in corn has been greatly relieved by the introduction of meat, potatoes, and other vegetables. Since within twenty-five hundred years it is supposed that the consumption of corn has diminished in some countries fifty per cent. Man has been fruitful of late in trying to establish some saving equilibrium between years of scarcity and years of abundance, as these inequalities often proceed from inclement seasons and other causes scarcely within his control. The increase of mortality, the decrease of births, the suspension of marriages, and serious bodily diseases are some of the important social phenomena attending years of scarcity of food.

Commerce, as an economical intermediary between the producer and consumer, has an important function to perform; manufactures, as giving a new and useful value to the crude productions of Nature, is not less valuable as an agent in our well-being; but agriculture, though less pretentious, is equally indispensable, and should be regarded as the most potent of all.

The history of agriculture, comprehensively written, ought to embrace a comparative study of soils, of climates, of implements, and labor, with corresponding references to the degrees of human civilization as modified and determined by these several agencies. There is little doubt of there being a close and inseparable connection between them, which the future is destined to fully disclose. Before man devised means of extracting agriculturally from the earth his means of subsistence, centuries must have passed away in preliminary preparations for this art. The taming of the ox and the horse, and it may be other animals, and their affiliation with man as industrial powers, was a wonderful inspiration of primitive humanity, however it may be thoughtlessly overlooked now. The origin of agriculture is equally as obscure as the country where, and the people amongst whom it was first cultivated. Taking Egypt as its historical starting-point, we can easily trace its extension to the west and north in common with all the other branches of primitive knowledge having their sources in Egyptian culture. The Jews were evidently indebted for their agricultural knowledge to the Egyptians, but improved this knowledge by the application of the ass and the ox to the cultivation of the earth, the Egyptians having been, through their superstitious notions, excluded from the agricultural use of these two animals. They also possessed some useful implements not known to Egypt. Greece, in like manner, owed its knowledge of agriculture to Egypt. The Pelasgi represented to us as living upon acorns in the bosom of deep forests, were familiarized by a colony from the borders of the Nile, with agricultural habits, and made acquainted with new alimentary substances. Agriculture, however, in Greece was more a thing of honor than of serious cultivation, owing to the country being peopled by heterogeneous peoples constantly at variance with each other. Ceres and Bacchus, as theological representatives of corn and the grape, were duly honored by the Greeks as an acknowledgment of the fecundity of the earth and its invaluable gifts. Some of the leading points of Grecian agriculture are: the division of the soil amongst individuals who appear to have transmitted it to their descendants in equal portions; the first use of pasture; the repose of the soil after the third cultivation; the use of sowing seed; the employment of the reaping-hook in harvesting; that of mortars in crushing grain; that of two kinds of ploughs; and other valuable inventions for a knowledge of which we are indebted to Homer, Hesoid, Theophrastus, and other Greek writers. If we pass now to Roman husbandry, we shall discover remarkable progress, and the final development of agricultural processes in the line of their empirical growth. Subsequent discoveries and improvements must be due to the application of scientific conceptions to practical experiences, and with this operation of the human mind has commenced a new and inexhaustible procedure in all agricultural operations. The *res rustica* will henceforth be controlled and advanced by the application of science. As this discovers new principles as to the nature of the soil, its mode of fertilization and culture, the farmer will be more successful in his laborious operations. For the Egyptian Iris, the Grecian Ceres and Triptolemus, the Italian Saturn or Janus, and the other theological machinery of ancient agriculture, may be substituted modern chemistry alone. It is thus that a multiplicity of fictions is reduced to one real veritable unit. Well may the author of the work before us say: "The glory of the warrior, that is, the "talent of destruction, carried to its highest point, is but "a brilliant mirage, which dazzles but to lead us astray. "True grandeur consists in victories over Nature, in fruit-"ful discoveries in the creations of genius. The benefits "which they effect are extended to all nations, and to all "centuries; they perpetuate themselves, and go on "increasing from age to age; they will pass away only "with the universe. But when warriors have descended "into the tomb, when time has scattered their dust, what "becomes of all their victories? These deeds, so vaunted, "tell against them; the faculties of these powerful men, "directed towards the peaceful cultivation of the soil,

* Histoire de l'Agriculture depuis les temps les plus reculés jusqu'à la mort de Charlemagne. Par M. Victor Cancalon. Limoges, 1857.

" would have secured the happiness of the world, while " the edifice of their glory and of their ambition is raised " only on public misfortune."

Agriculture, as a branch of human industry, has a value equal, if not superior to any other, and lies at the very core of national well-being. Yet it is strange that in antiquity it yielded as much in dignity to war as it does in modern days to commerce. The social humility of those who first, and for ages have cultivated the soil, can alone account for this. Prisoners of war, martially subdued races, and serfs were the first apostles of this noble branch of industry. Those who fattened upon, and enjoyed the fruits of their modest labors, were inhumanly unmindful of their great and indispensable importance as members of the commonwealth. Agriculture has had no remarkable eras, no famous and brilliant chieftains, to give a world-wide charm to its name, or to attract crowds of distinguished followers: it had no Cæsar or Alexander in antiquity, no Napoleon or Wellington in modern times. With the exception of the beautiful labor which Virgil has consecrated to it, Art has even neglected it, except as a mere accessory to some other more popular subject. However neglected by the ambitious and the proud, agriculture becomes of more importance daily. As national populations increase, as commerce, and manufacturing pursuits absorb public attention, as cities become larger, and more seductive to the more aspiring members of the community, agriculture alone can be relied on as the only means of protecting overgrowing populations from famine, communities from civil war, and men from a disposition to that over-excitement which is gradually adding members to our lunatic asylums, or bequeathing evils to coming generations that may be still worse. If past social hierarchies have slighted agriculturers and their calling, a fuller development of science is sure to do it justice, sure to give it that place among the not only useful, but humanizing forces of society, to which it is so eminently entitled. It is a mistake to suppose that it is not in keeping with a high degree of intelligence. In fact, all things considered, we doubt if there be any pursuit in life that opens out a more congenial field for the exercise of the body, the head, and the heart. What a protection it is from all the dissipations attending city life, what a safeguard against the revulsions of commercial and manufacturing enterprises. To the young commencing life, as well as to the old about to close it in retirement, it is equally serviceable, equally desirable, and equally necessary to a complete and well developed existence.

It is not good for man to be kept perforce at all times in the presence of his species. A world from which solitude is extirpated is a very poor ideal. Solitude, in the sense of being often alone, is essential to any depth of meditation or of character; and solitude in the presence of natural beauty or grandeur, is the cradle of thoughts and aspirations, which are not only good for the individual, but which society could ill do without.—*J. S. Mill.*

Notes and Queries.

The Skies of Italy.—Italy having become distinguished as the land in which the Arts have most flourished, it has been the fashion with amateur writers to ascribe it chiefly to the influence of her skies, without well knowing the nature of them, or how they may compare with other atmospheres, and what their influence really is. The writers on Art in England, more in times past than the present, when they have lamented the low state of Art, instead of taking it to themselves, for not employing it, have escaped by throwing the blame on her fogs and cloudy skies, without knowing that as regards the mere matter of light, the artist in England is better supplied than he would be in Italy. I never experienced the want of a good light in London. The fact is, that a blue sky from the north carries into the painter's room nothing but a dark blue light, and he has been very unobservant if he has not remarked that a passing cloud, lighted by the sun, immediately illuminated his room, his model, and his picture with a brilliancy, not only exhibiting both to greater advantage, but enabling him to finish his work with greater neatness.

The American artist who has travelled and studied in Europe should know, if he has taken the pains to compare the pictures produced in different countries, and to reflect upon the influence of the atmosphere, that the skies most favorable for the purpose of his Art are those which are illuminated with beautiful masses of floating sunny clouds, hiding the dark and chilly blue. The poets, therefore, who praise the blue skies of Italy, deceive themselves and their readers. The excellence of the Arts of Italy was not owing to her climate, but to their employment by the church, the emulation of the nobility and of the merchant princes of rival states. The skies of America and Germany are more blue, and, therefore, unfavorable; whilst the clouds of England, Holland, and Italy, especially Venice, have powerfully contributed to assist the artist in his studies of light and color.

In painting a portrait, and wanting a bright light for the finishing touches, of only a few minutes, I have often waited four or five days for a cloud to pass my north window, as an angel of light. To remedy this defect I once tried to make an artificial cloud by thrusting out of the top of my window a frame covered with white muslin, raising it by a rod to catch the sun's rays over the roof of the house. It, indeed, produced a bright effect of light, but horribly unfavorable for my purpose, because every portion of my sitter's face, not *directly* lighted by the muslin, but receiving its light from the sky, appeared as if dyed with horrible splotches of indigo. My artificial cloud was too small, and its edges too sharp—unlike a broad expanse of light fleecy cloud at a distance, entirely overpowering the influence of what little blue there might be in its vicinity, which only answered the good purpose of producing some soft pearly tints between the lights and shadows. This experiment strikingly proved that the light from a clear blue sky is disadvantageous to produce a warm glowing effect of color, and that it is really only a *twilight*. Every portrait painter should repeat this experiment for his own satisfaction. It is said that Titian painted with a south light; but the objection to it in America arises from the *sudden* changes caused by the frequent interruption by clouds crossing the sun. During the long, cold, blue days of winter this is less objectionable,